Other related CRIS projects:

A CRIS search of active projects on animal manure and wastewater irrigation identified 22 projects, of which two are from this research unit. CRIS projects of relevance to this research include a project by the Western Regional Research Center in Albany, CA (#5325-42-000-023-00D) dealing with treatment of animal manure to prevent pathogen transmission and to gain a better understanding of pathogen ecology in agricultural settings. Another related project is being conducted by the U.S. Meat Animal Research Center in Clay Center, NE (#5438-42000-006-00D) dealing with the prevention of zoonotic pathogen transmission from animal manure to human food. Both of these research projects are similar to my proposed research in that they use a molecular biology approach for the detection and identification of specific pathogens including *Campylobacter* from environmental samples however, they are addressing potential contamination through animal waste rather than municipal waste used for agriculture. Another related project is being conducted by ARS in Athens Georgia (#6612-13610-002-09R) "Subsurface transport of *Cryptosporidium* and *Giardia* from grazing lands to drinking water supplies" to help understand the transport of pathogens in the subsurface to a stream, however it uses polystyrene microsphere in place of the pathogens. A project by the University of California, Riverside (CRIS #5310-42000-001-02S) includes the fate and transport of pathogenic microorganisms in surface water, groundwater and the atmosphere from animal waste (beef or poultry) products. Also, a CRIS project (5344-42000-013-00D) is being conducted in my research unit as a companion study to my proposed project. This study addresses the fate and transport of organic chemical present in wastewater used for irrigation including endocrine disruptors. In addition, CRIS #4344-42000-13-01S by Arizona State University is being conducted within my laboratory to see if pharmaceutically-active compounds present in wastewater can pose a threat to groundwater quality.

Several CSREES projects were identified that are considered complimentary to the research proposed herein. However, some of these projects may no longer be active. CSREES # 96-35102-3839 "Role of subsurface drainage in transport of *Cryptosporidium parvum* oocysts" conducted by Cornell University, Ithaca, NY addresses the transport of *Cryptosporidium* in the subsurface through preferential flow paths in the soil. CSREES #ARZT-319650-G-21-512 "Role of irrigation water in contamination of imported and domestic fresh food" is a project using wastewater irrigation conducted by the University of Arizona, Tucson. The irrigation waters from canals used for crop irrigation were assessed for the presence of pathogens, however the impact of irrigation on groundwater quality was not addressed. CSREES #PEN03571 "Wastewater irrigated forests for timber and wildlife" conducted by Pennsylvania State University uses municipal wastewater as irrigation to study abundance and distribution of plant communities.